

REMARKS

Favorable reconsideration is respectfully requested.

The claims are 17-25 and 27-31.

The above amendment is responsive to points set forth in the above-identified Official Actions.

Firstly, undersigned acknowledges with appreciation the helpful interview with Examiner Leonard on September 15, 2010.

A summary of the representations made at said interview is included in the remarks below.

Claims 17-29 have been rejected has obvious over Norlin et al. (US 2002/0099110).

This rejection is respectfully traversed.

Norlin discloses radiation curable coating compositions containing backbones derived from polyols used either singly or in combinations of two or more [0012]. When multiple polyols are used, they can be linked by different means including urethane linkages [0014]. The compositions are used as coatings having improved release properties or as optical fibers coatings having good spooling properties [0008].

On the other hand, the radiation curable adhesive formulation of above-amended claim 17 is a radiation curable adhesive formulation comprising a urethane (meth)acrylate polymer and a tackifier. It requires a weight ratio of rubber-derived polyol to acrylic-derived polyol from 0.1 to 10 and the urethane (meth)acrylate polymer is obtained by a 2step process. In contrast see Norlin [0029].

The process of claim 22 is nowhere disclosed or suggested nor is the product therefrom. See especially claim 31 which specifically recites the product of this process.

In addition, Norlin doesn't teach or suggest any radiation curable formulation comprising a urethane (meth)acrylate polymer a tackifier to be used as an adhesive formulation. Nor does he teach or suggest any specific process to obtain the urethane (meth)acrylate polymer nor any weight ratio of one polyol to the other to be used to obtain the desired radiation curable oligomer.

The presence of acrylic and rubber polyols residues in the oligomer backbone in the relative amounts, as presently recited, leads to an unexpected combination of performances for use as radiation curable adhesive (page 12, lines 12-24, page 13, lines 20-23 or from the test results of Examples 7 and 8 (page 38, lines 9-11)).

As stated above, the radiation curable composition of Norlin is intended for use as a coating, while the radiation curable formulation of the present claims is for use as an adhesive. An adhesive is defined in Hawley's Condensed Chemical Dictionary (copy enclosed) as a substance that is capable of bonding other substances together by surface attachment while a coating is a layer applied to a substrate. A coating doesn't aim at bonding substances together.

In consequence, one skilled in the art would even not consult Norlin to develop a radiation curable adhesive formulation.

In view of the above, amended claims 17-25 and 27-29 are clearly novel and unobvious over Norlin et al.

Further, the claims have been rejected as unpatentable over Acevedo et al. (US 7,189,781).

This rejection is also respectfully traversed.

Acevedo discloses a moisture curable, radiation curable polyurethane prepolymer (column 3, line 39 to column 9, line 46) to be used in a sealant composition. The prepolymer includes a first functional group capable of polymerizing upon exposure to moisture and a second functional group capable of polymerizing upon exposure to radiation. Moisture functional groups include isocyanate groups and silane groups (column 3, lines 39-49, column 7, lines 28 to column 8, line 57).

On the contrary, the polymer of amended claim 17 of the present invention doesn't include a second functional group that is capable of polymerizing upon moisture exposure as is clear from Formulas 1A and 2A and hence the formulation based thereon is not a dual cure composition.

Furthermore, the formulation of the present invention requires a weight ratio of rubber derived polvol to acrylic derived polvol from 0.1 to 10 in the urethane (meth)acrylate polymer.

As is evident from the present specification, the presence of acrylic and rubber polyols residues in the oligomer backbone in the relative amounts described leads to an unexpected combination of performances for use as radiation curable adhesive (page 12, lines 12-24, page 13, lines 20-23 or from the test results of Examples 7 and 8 (page 38, lines 9-11)).

Further, a person skilled in the art would even not consider a document such as Acevedo relating to dual cure sealant compositions to develop a radiation curable adhesive formulation.

As stated above, Acevedo requires a moisture curable functional group which is clearly excluded by the present claims and in particular, new claims 30-31 which are in "consisting essentially of" format and thus clearly exclude such moisture-curable moieties.

At the interview, the Examiner pointed out that even if "consisting essentially of" terminology is employed, the radiation curable polymer of column 10, lines 25 to 57 of Acevedo is suggestive of the presently claimed polymers. However, there is no motivation to add a tackifier to a composition consisting essentially of the radiation curable polymer of Acevedo column 10, lines 25 to 57, per se.

Lastly, one skilled in the art would not be motivated to combine the teachings of Norlin related to coatings with a teachings of Acevedo related to dual-cure sealants, to develop a radiation curable adhesive formulation as presently claimed and even if one were to combine both references, he would not arrive at the presently claimed radiation curable adhesive formulations but rather a coating or sealant with dual cure properties.

Accordingly, the rejections on prior art are untenable and should be withdrawn.

No further issues remaining, allowance of this application is respectfully requested.

If the Examiner has any comments or proposals for expediting prosecution, please contact undersigned at the telephone number below.

Respectfully submitted,

Zhikai WANG et al.

By Matthew M.
Jacob/

Matthew M. Jacob
Registration No. 25,154
Attorney for Applicants

Digitally signed by /Matthew M. Jacob/
DN:cn=Matthew M. Jacob/o, o, ou:
email:mpjacob@wendersroth.com, c=US
Date:2010.09.16 15:13:42 -04'00'

MJ/kjf
Washington, D.C. 20005-1503
Telephone (202) 721-8200
Facsimile (202) 721-8250
September 16, 2010